Course Material
Node-RED

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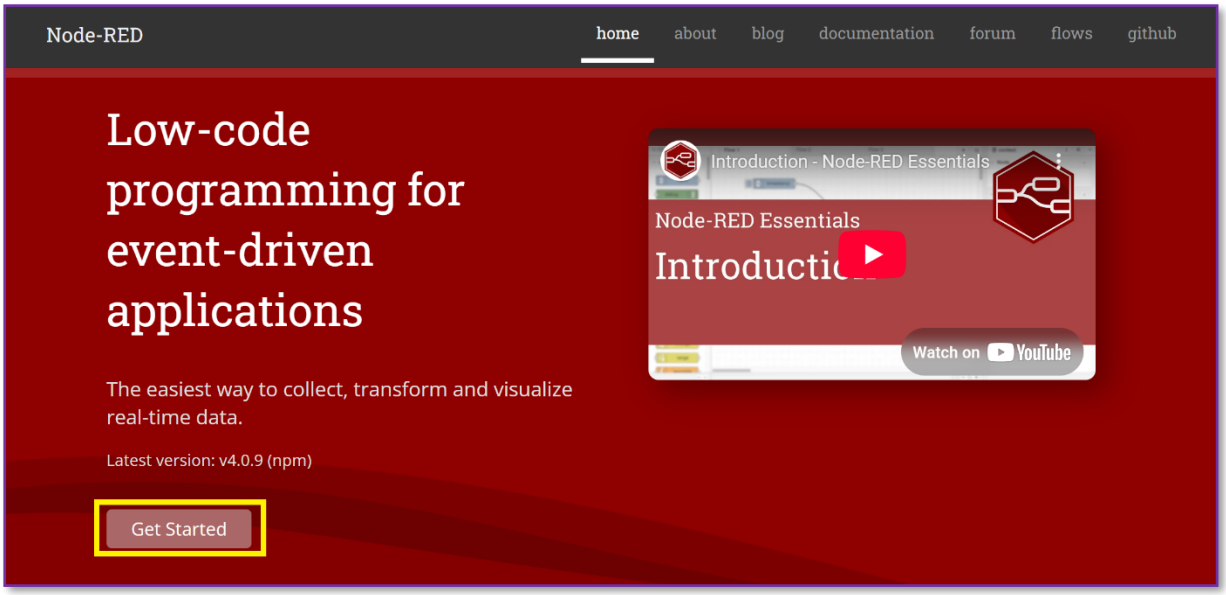
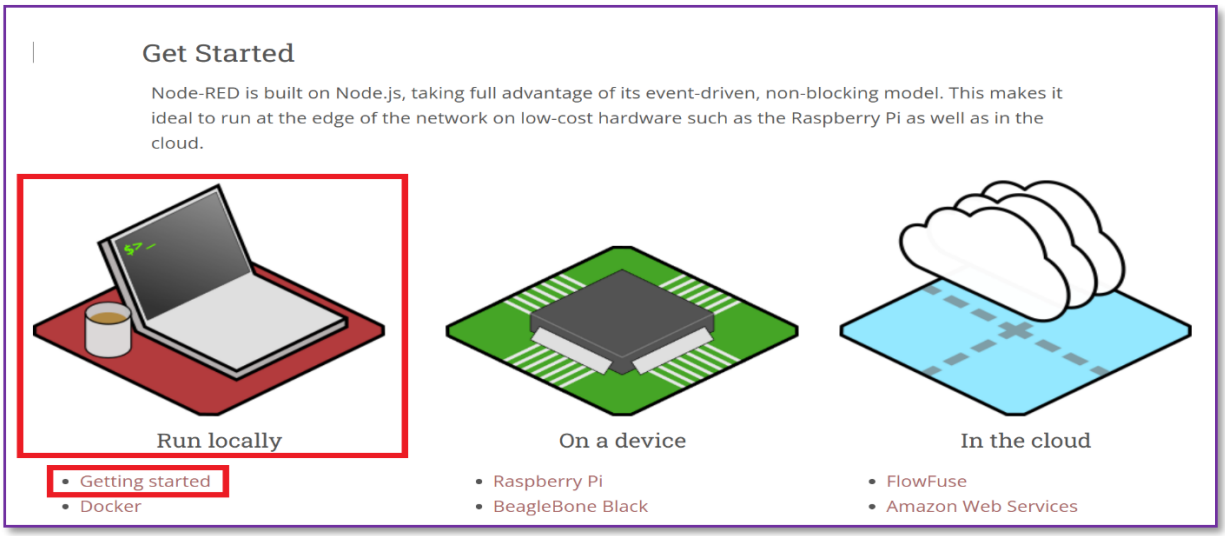
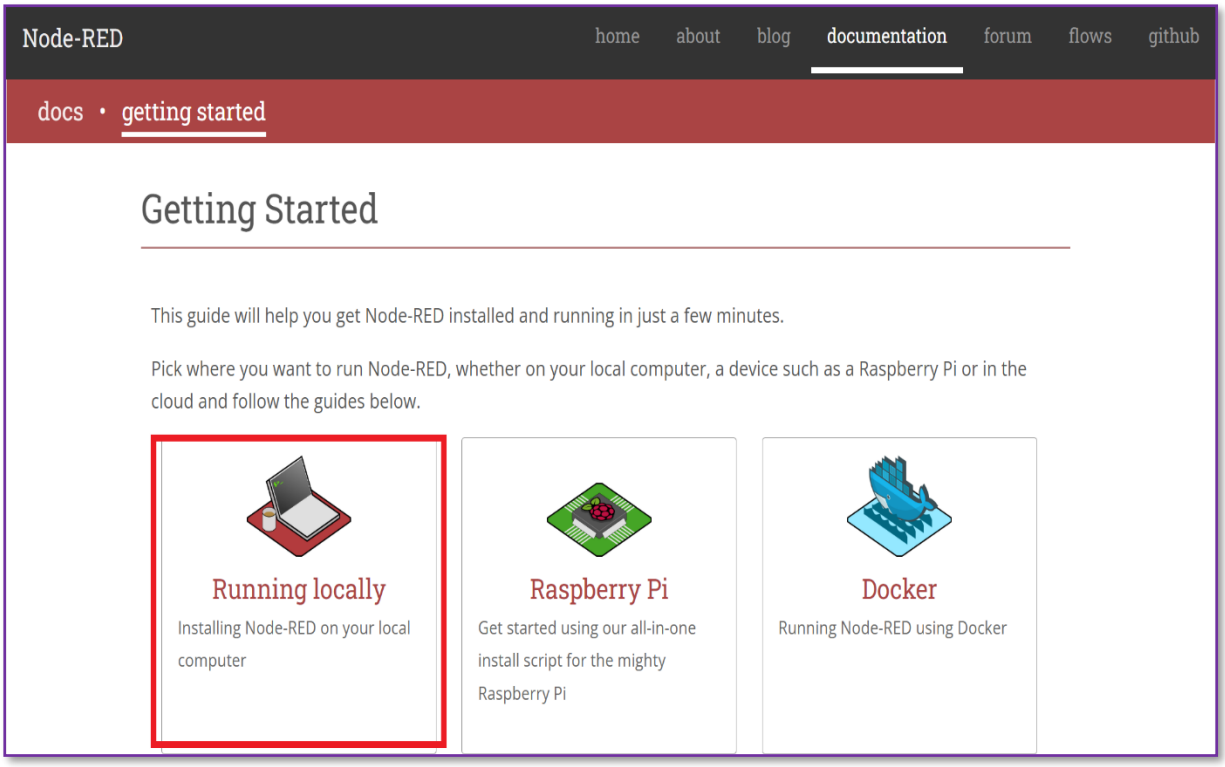
Installation

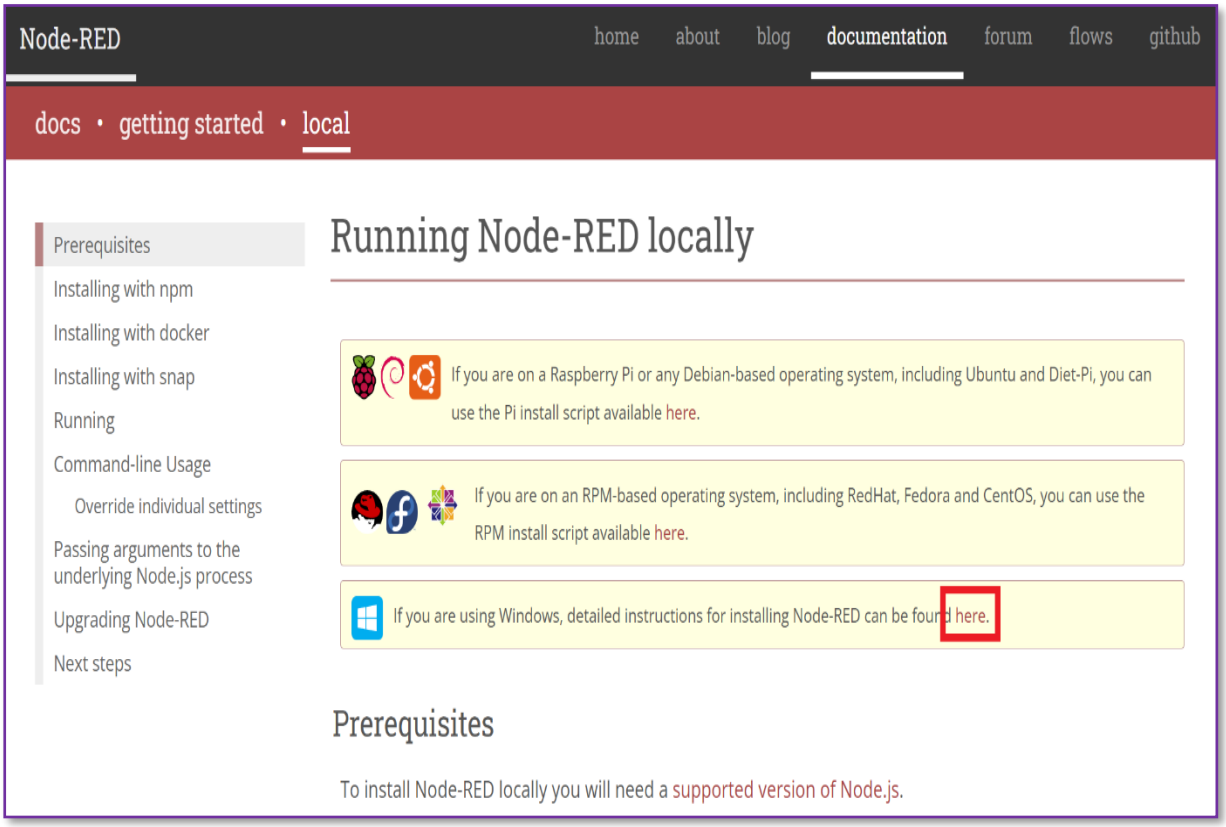
1. Go to https://nodered.org/
2. Click on **"Get Started → Run locally → Getting started → Running locally".**



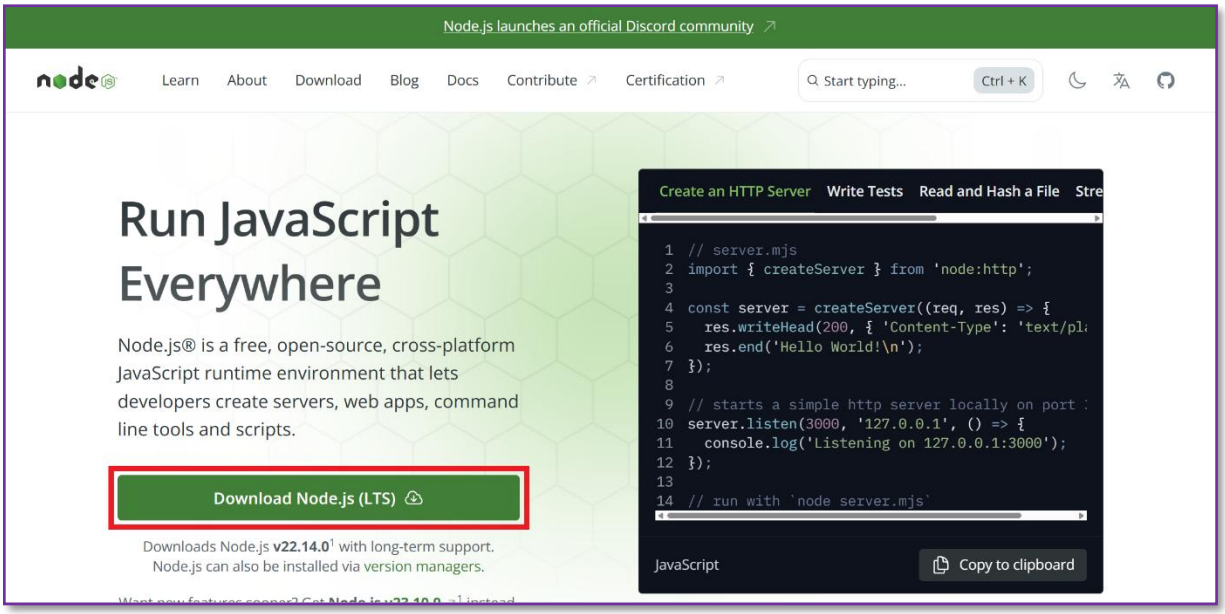


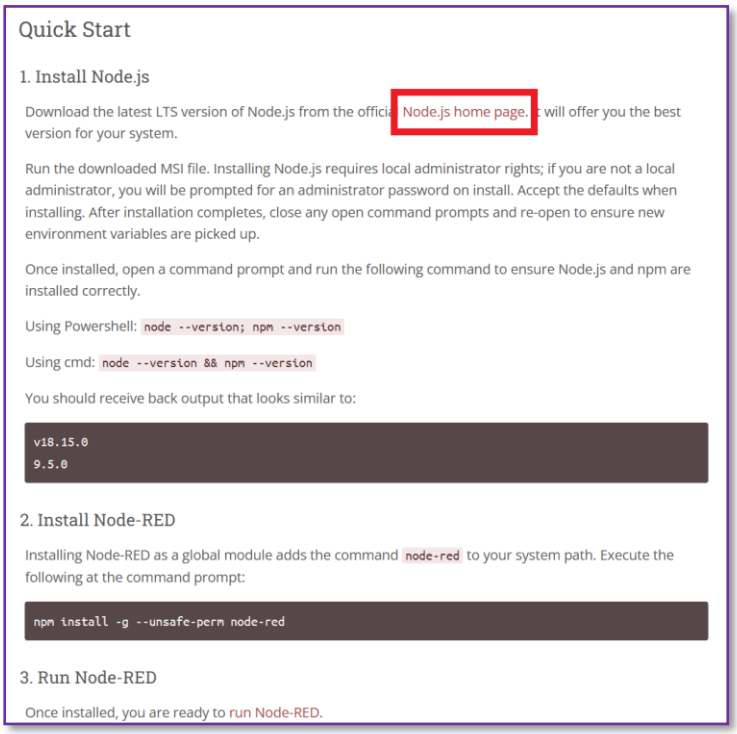


3. For Windows installation, click on the highlighted link and follow the steps to install Node.js.
   https://nodered.org/docs/getting-started/windows



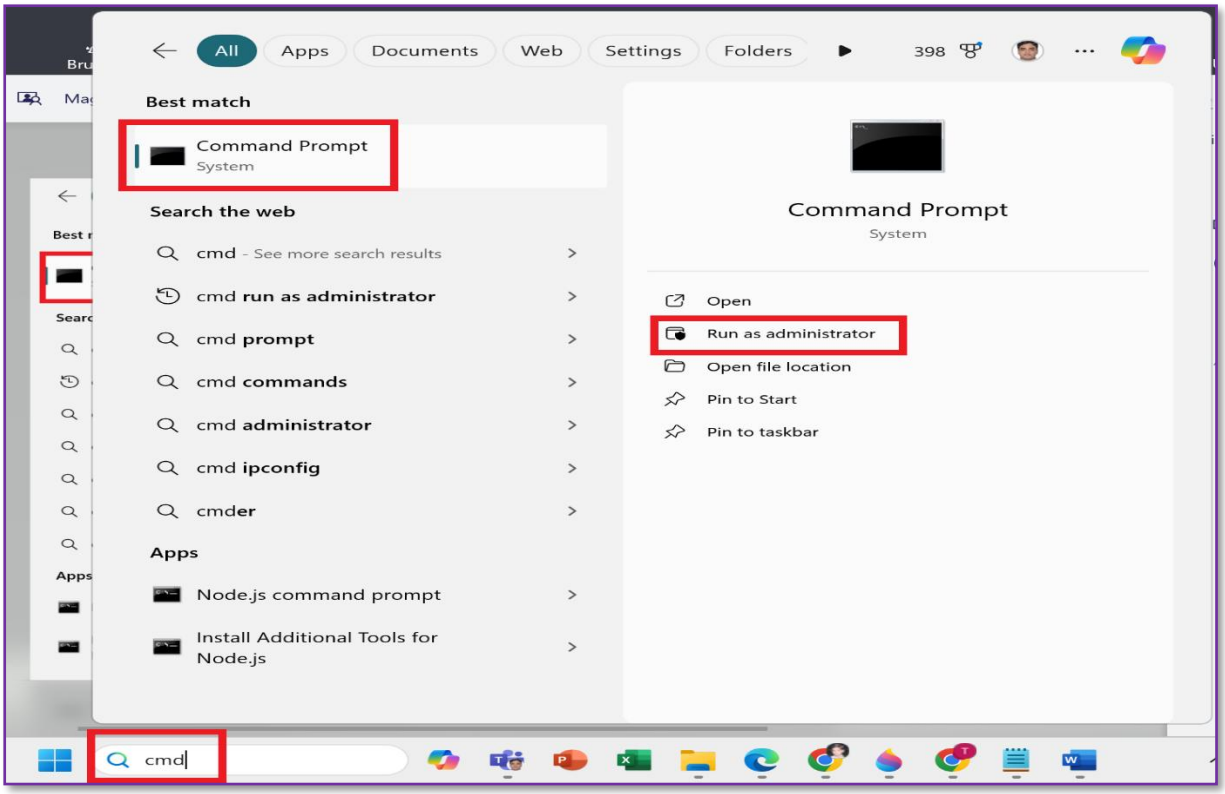
4. First, install Node.js and then proceed with the steps in the given order.





Node-RED – User Guide

1. Open the Command Prompt on your PC by typing "**cmd**" in the search bar and selecting "**Run as administrator**". Inside the Command Prompt, type "**node-red**" and press **Enter** to run Node.js.


All
Apps
Documents
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398
Best match
Command Prompt
System
Search the web
cmd - See more search results
cmd run as administrator
cmd prompt
cmd commands
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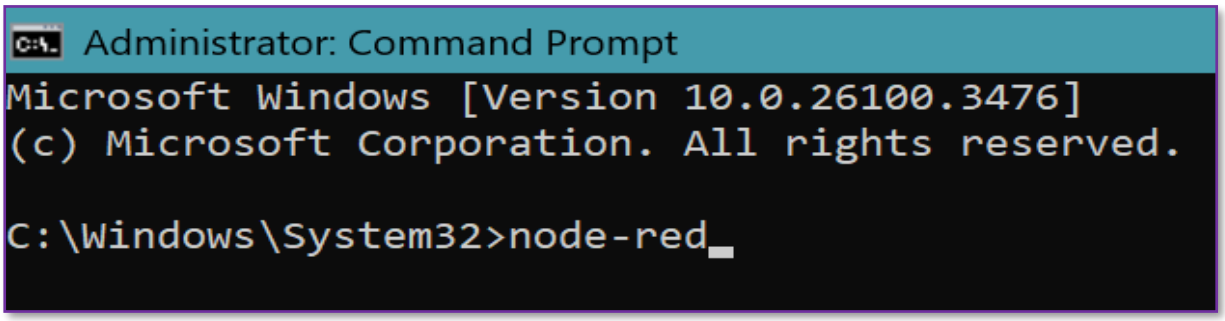
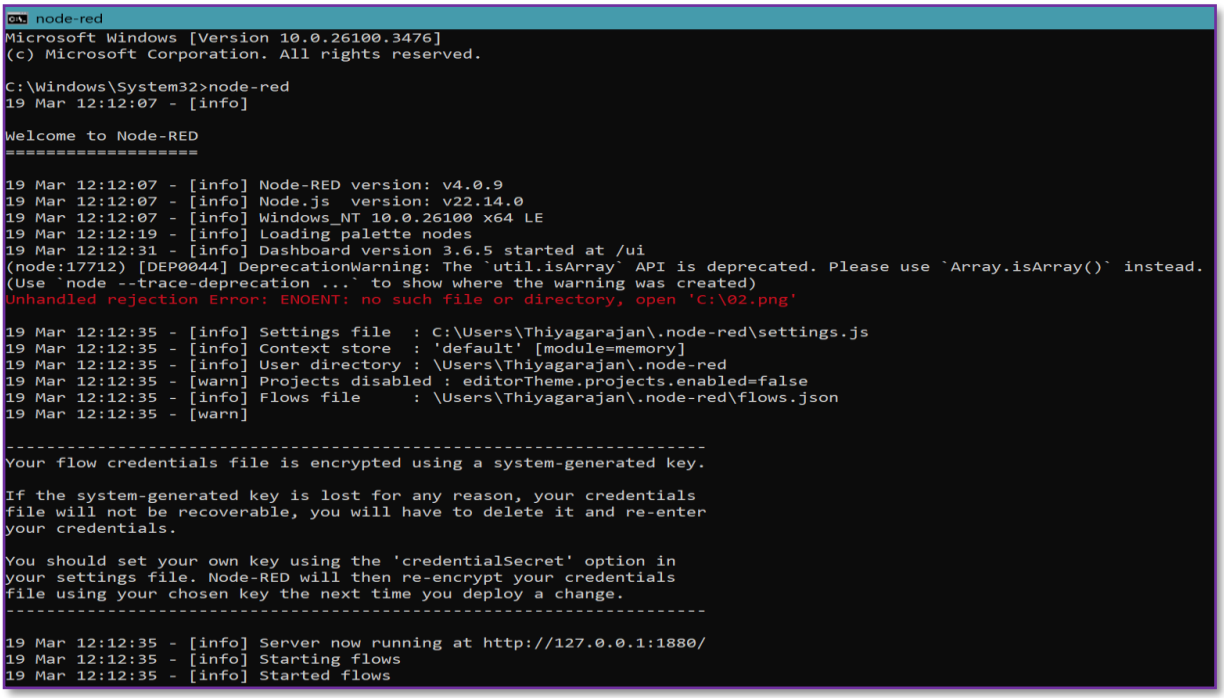
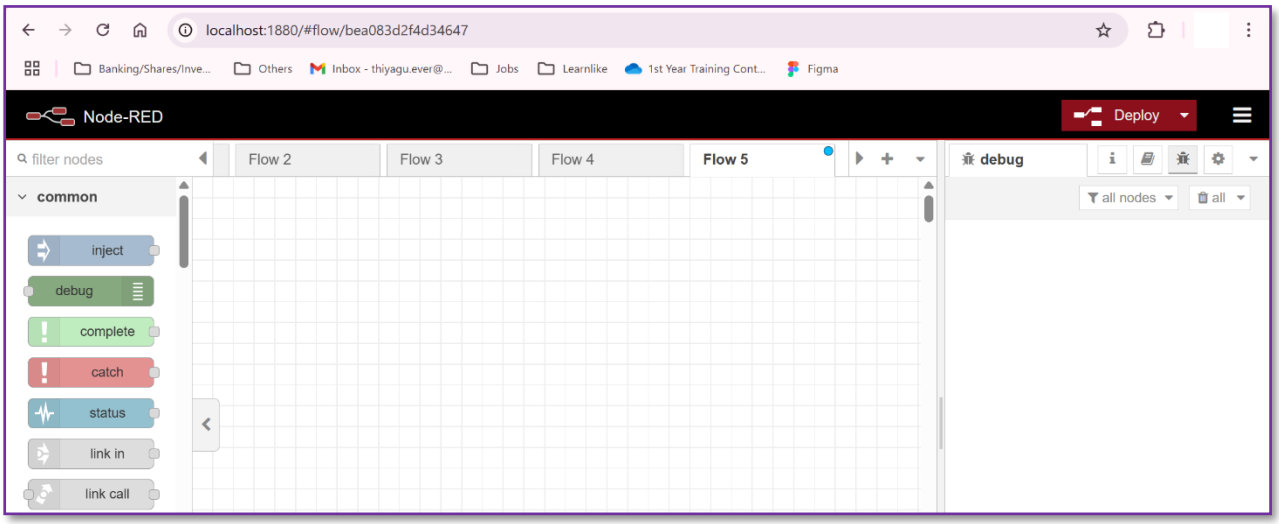
cmder
Apps
Node.js command prompt
Install Additional Tools for Node.js
Command Prompt
System
Open
Run as administrator
Open file location
Pin to Start
Pin to taskbar
cmd


Administrator: Command Prompt
Microsoft Windows [Version 10.0.26100.3476]
(c) Microsoft Corporation. All rights reserved.
C:\Windows\System32>node-red


node-red
Microsoft Windows [Version 10.0.26100.3476]
(c) Microsoft Corporation. All rights reserved.
C:\Windows\System32>node-red
19 Mar 12:12:07 - [info]
Welcome to Node-RED
19 Mar 12:12:07 - [info] Node-RED version: v4.0.9
19 Mar 12:12:07 - [info] Node.js version: v22.14.0
19 Mar 12:12:07 - [info] Windows_NT 10.0.26100 x64 LE
19 Mar 12:12:19 - [info] Loading palette nodes
19 Mar 12:12:31 - [info] Dashboard version 3.6.5 started at /ui
(node:17712) [DEP0044] DeprecationWarning: The `util.isArray` API is deprecated. Please use `Array.isArray()` instead.
(Use `node --trace-deprecation ...` to show where the warning was created)
Unhandled rejection Error: ENOENT: no such file or directory, open 'C:\02.png'
19 Mar 12:12:35 - [info] Settings file : C:\Users\Thiyagarajan\.node-red\settings.js
19 Mar 12:12:35 - [info] Context store : 'default' [module=memory]
19 Mar 12:12:35 - [info] User directory : \Users\Thiyagarajan\.node-red
19 Mar 12:12:35 - [warn] Projects disabled : editorTheme.projects.enabled=false
19 Mar 12:12:35 - [info] Flows file : \Users\Thiyagarajan\.node-red\flows.json
19 Mar 12:12:35 - [warn]
Your flow credentials file is encrypted using a system-generated key.
If the system-generated key is lost for any reason, your credentials
file will not be recoverable, you will have to delete it and re-enter
your credentials.
You should set your own key using the 'credentialSecret' option in
your settings file. Node-RED will then re-encrypt your credentials
file using your chosen key the next time you deploy a change.
19 Mar 12:12:35 - [info] Server now running at http://127.0.0.1:1880/
19 Mar 12:12:35 - [info] Starting flows
19 Mar 12:12:35 - [info] Started flows

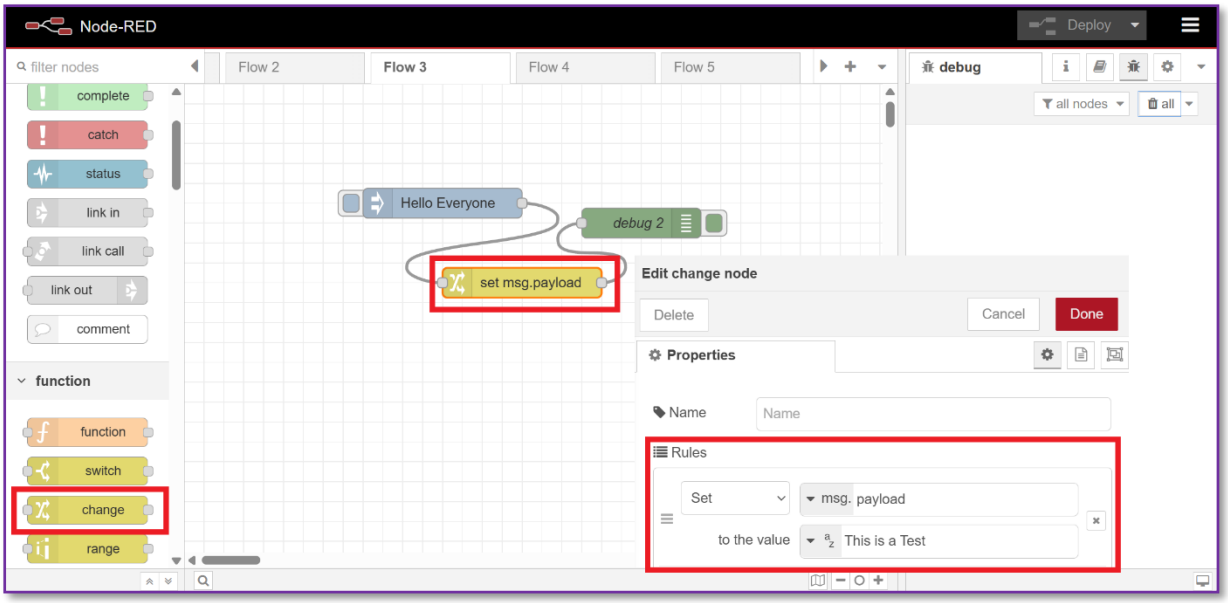
2. After initializing Node-RED, open any browser and enter **http://localhost:1880** in the address bar to launch Node-RED in the browser.



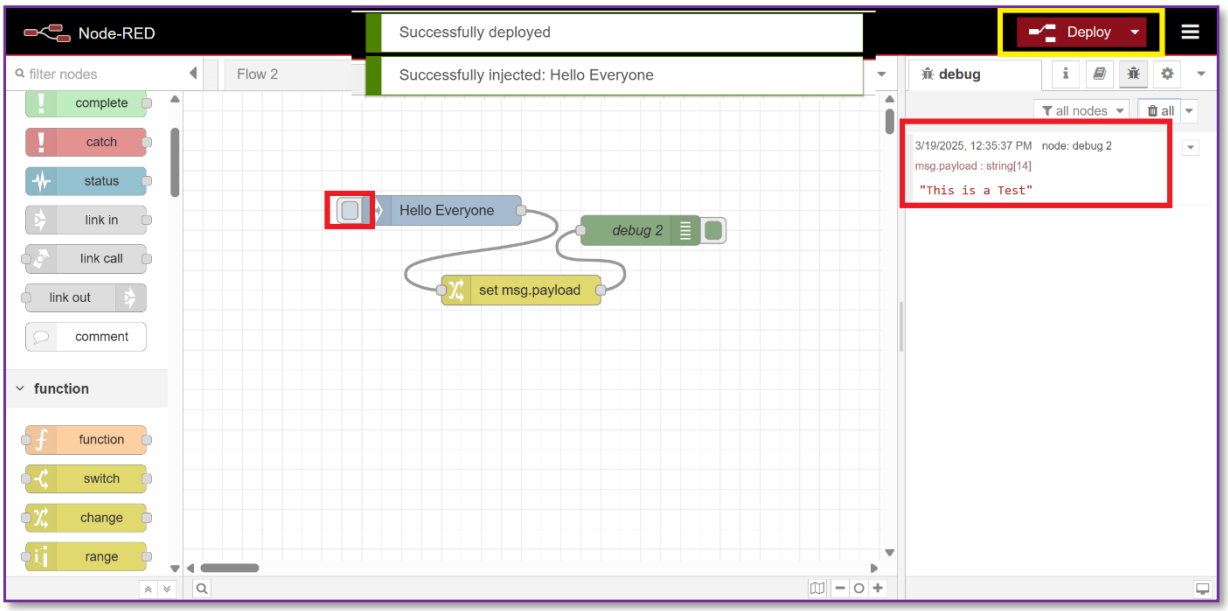
3. Follow this Node-RED YouTube tutorial to create your first flow and understand its functionality.

Note: ***Always keep the command prompt open to run Node.js. If closed Node-RED will stop working.***

4. Scroll down and add the "**change**" function to modify the **msg.payload** input to a new value.

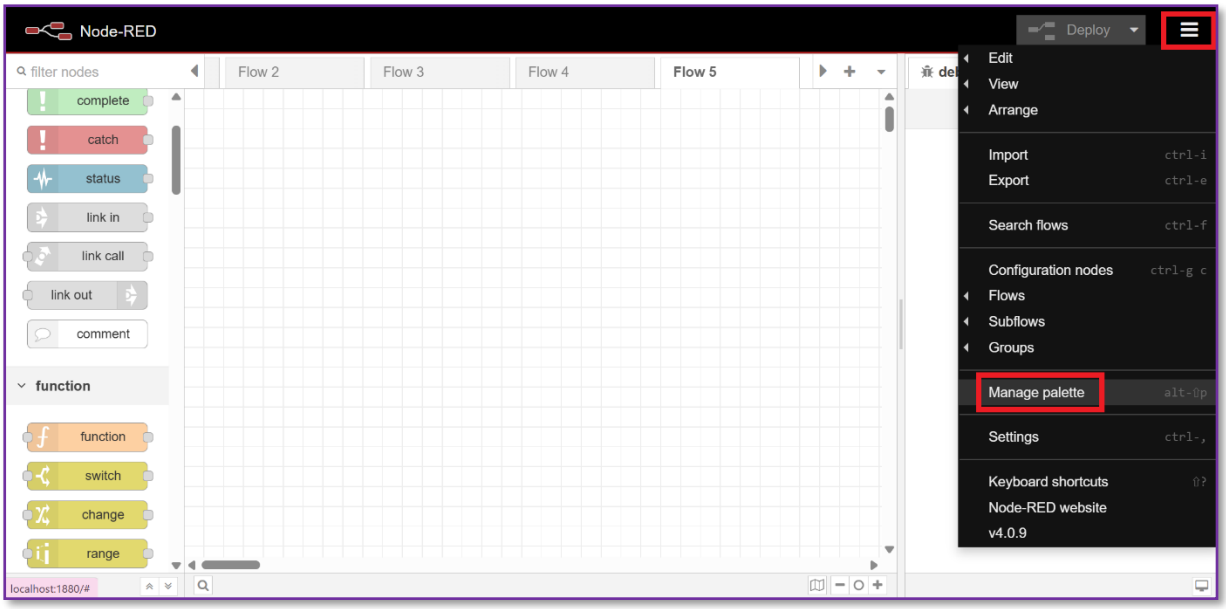


5. Click on "**Deploy**", then click on "**Inject**" to see the changes in action.

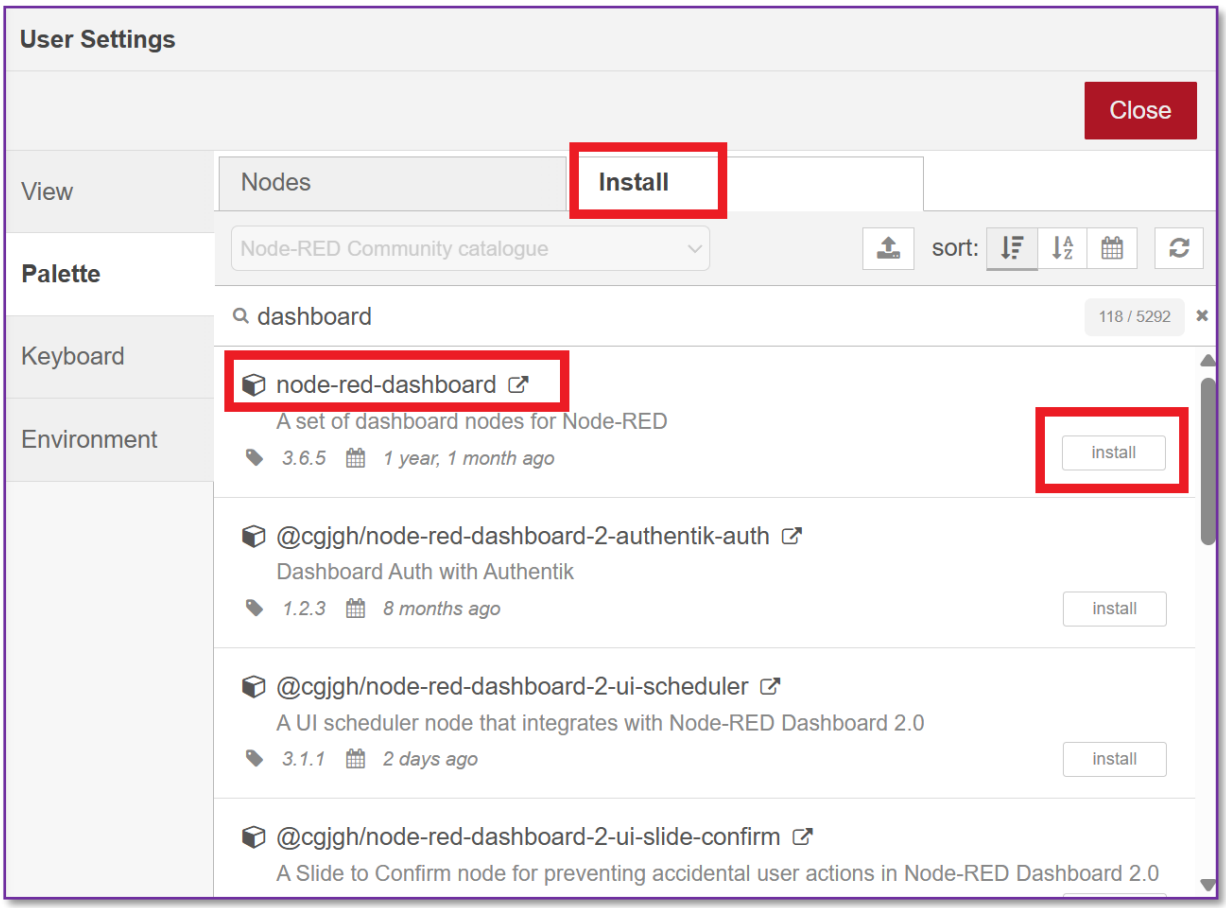


Node-RED – Dashboard

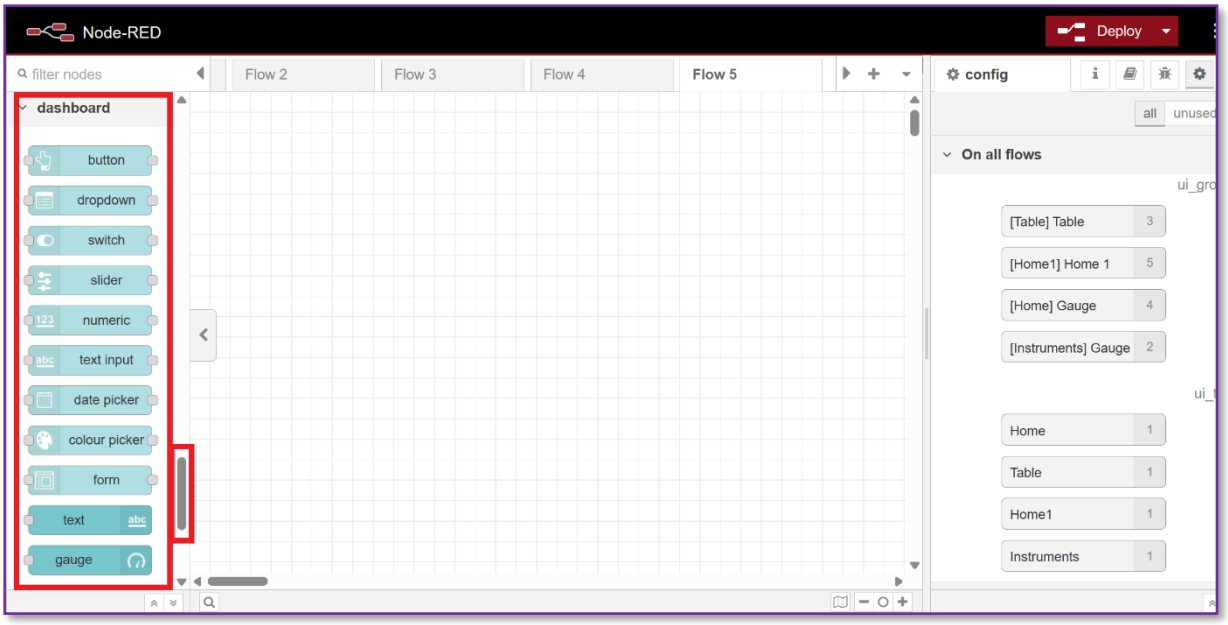
1. Click on the **Hamburger menu** (☰) in the top right corner and select **Manage palette**.



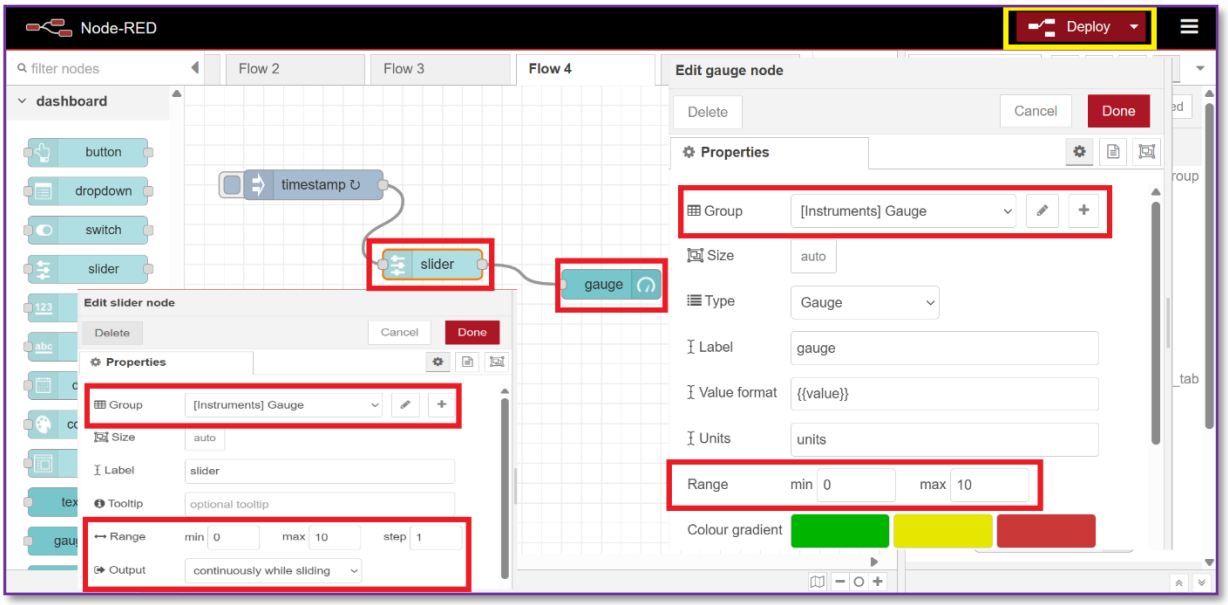
2. Go to the "**Install**" tab, search for **dashboard**, select "**node-red-dashboard**", and click "**Install**" to add the node.



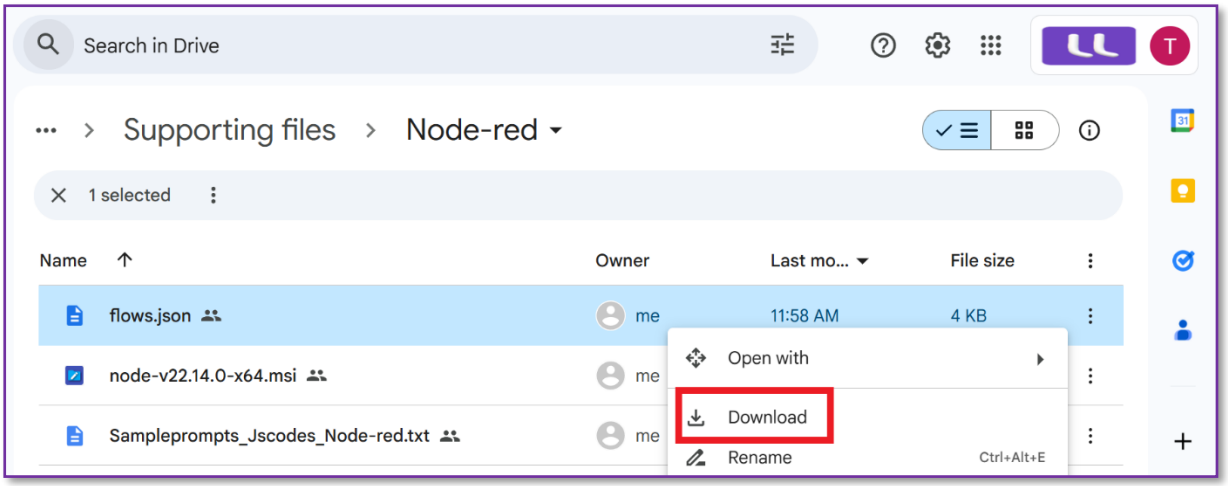
3. Scroll down the left navigation menu to view the dashboard nodes that have been added to your Node-RED workspace, allowing you to create UI components for your flows.



4. Follow this simple dashboard setup to connect a slider with a gauge. To access the UI in your browser, type **http://localhost:1880/ui**.



5. Download the flows.json file from Google Drive. In Node-RED, click on the hamburger menu and select **Import**. Choose the flows.json file from your local computer and click **Open** to add the flow. Finally, click **Deploy** to activate the flow.


Search in Drive
Supporting files
Node-red
1 selected
Name
Owner
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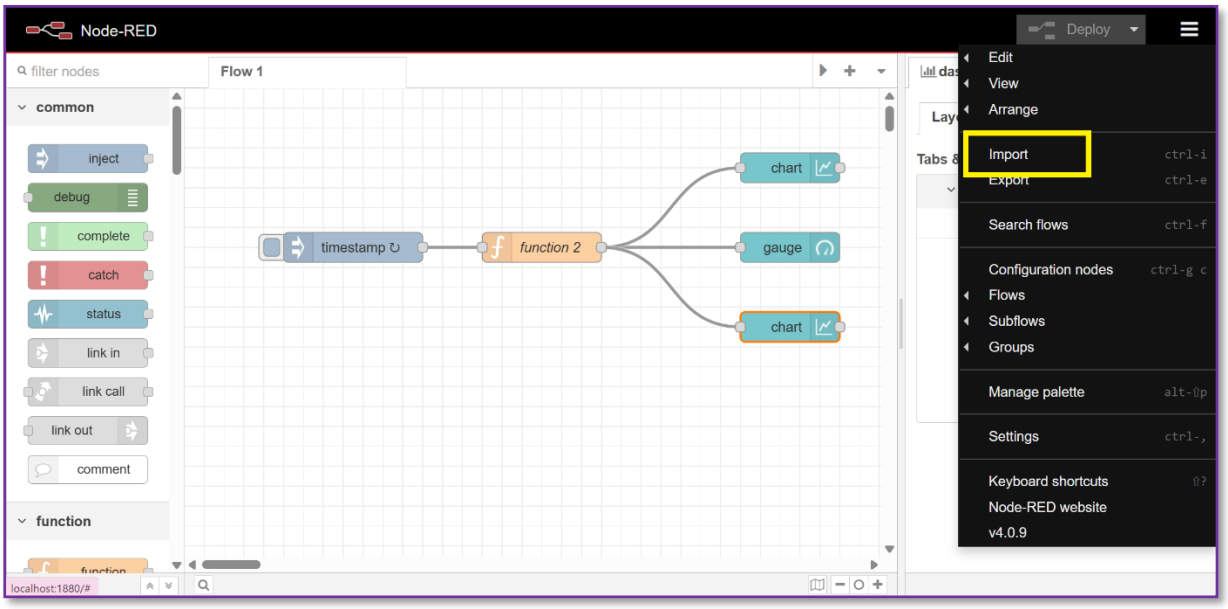
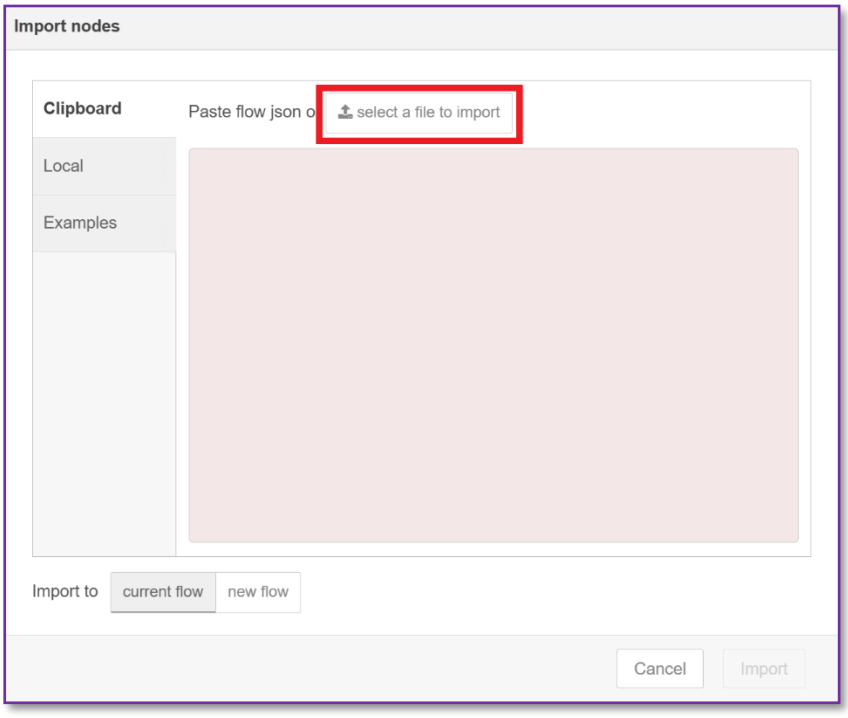
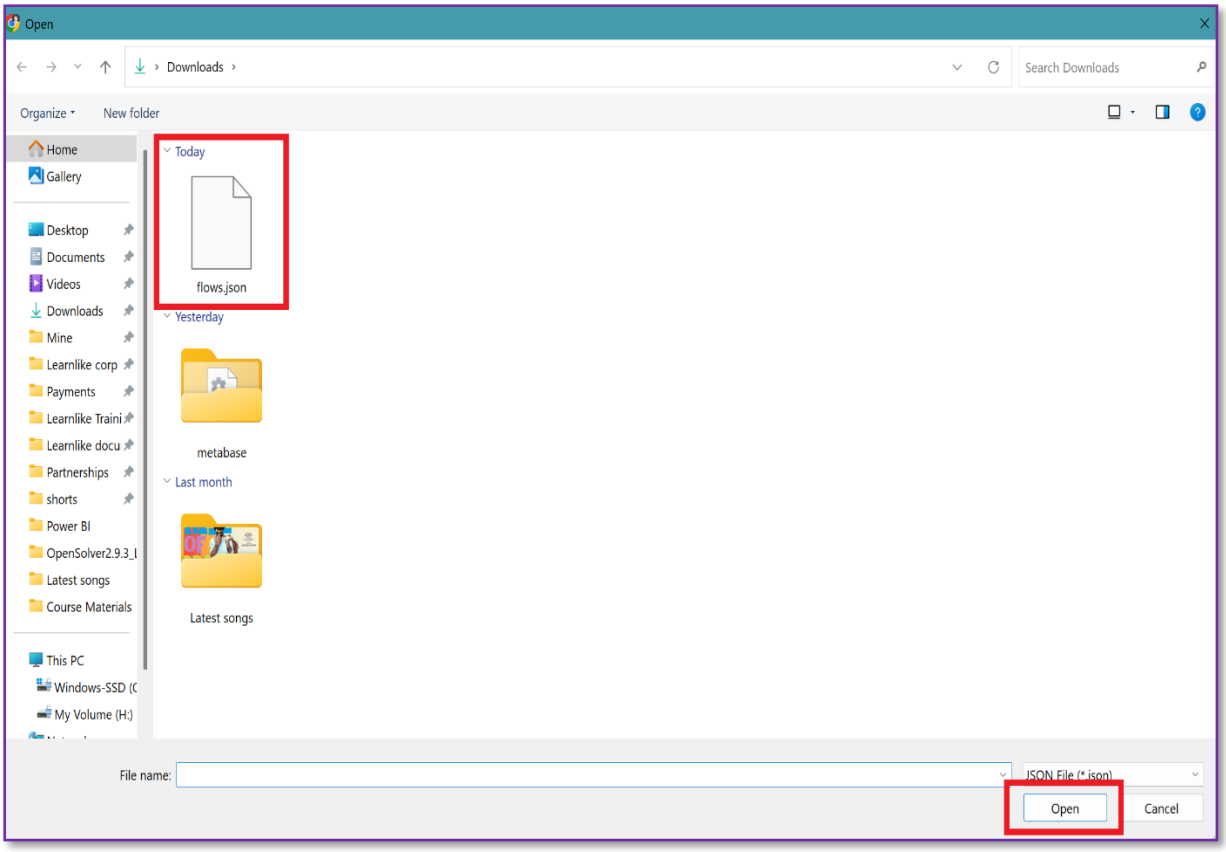
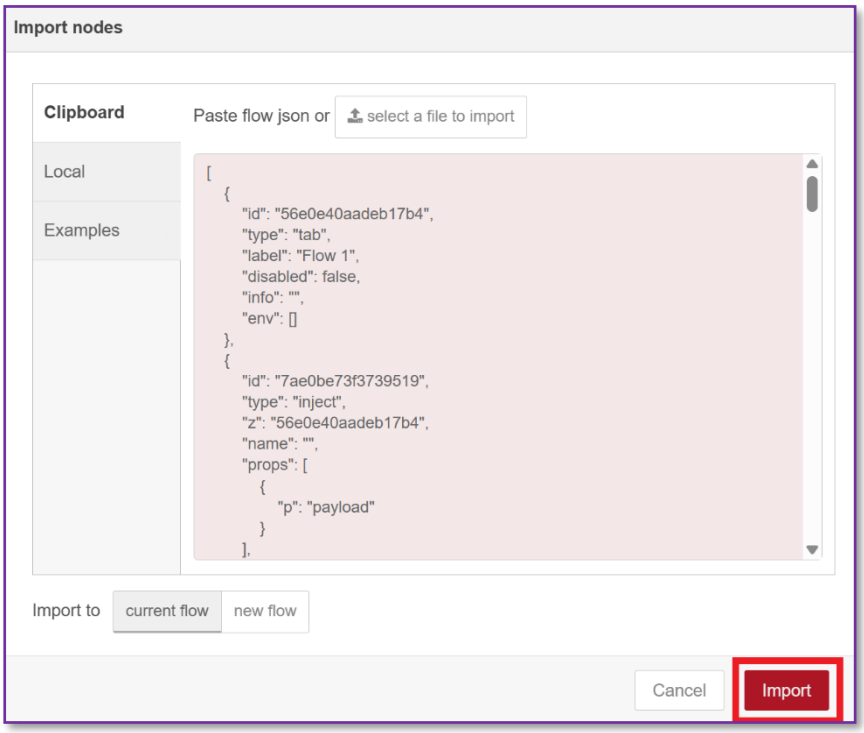
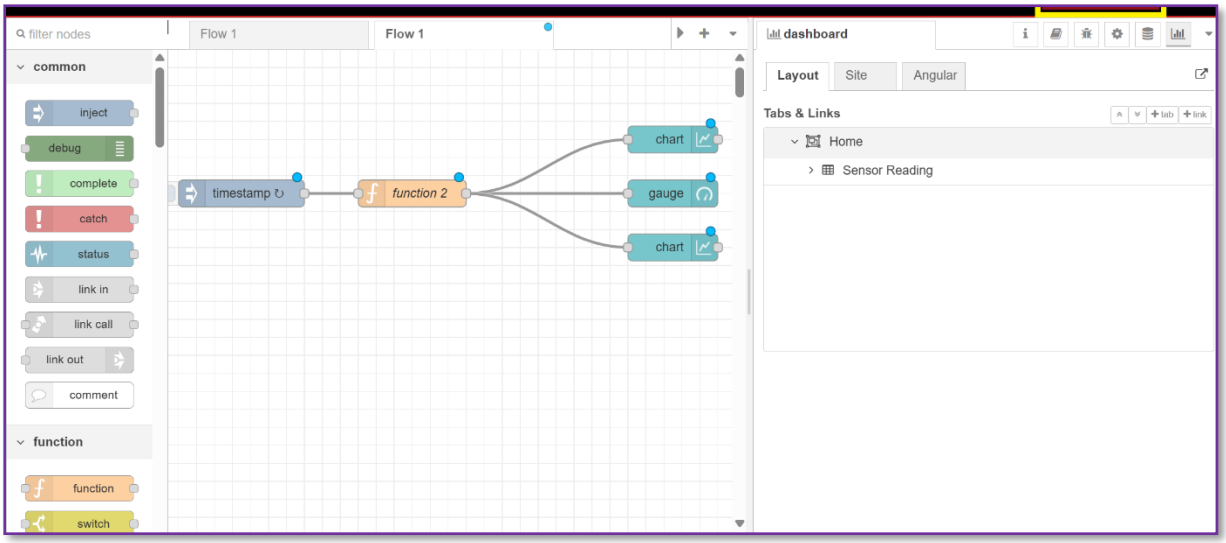
File size
flows.json
me
11:58 AM
4 KB
node-v22.14.0-x64.msi
me
Sampleprompts_Jscodes_Node-red.txt
me
Open with
Download
Rename
Ctrl+Alt+E


Node-RED
Deploy
filter nodes
Flow 1
common
inject
debug
complete
catch
status
link in
link call
link out
comment
function
timestamp
function 2
chart
gauge
chart
Edit
View
Arrange
Import
Export
Search flows
Configuration nodes
Flows
Subflows
Groups
Manage palette
Settings
Keyboard shortcuts
Node-RED website
v4.0.9
localhost:1880/#


Import nodes
Clipboard
Paste flow json o
select a file to import
Local
Examples
Import to
current flow
new flow
Cancel
Import

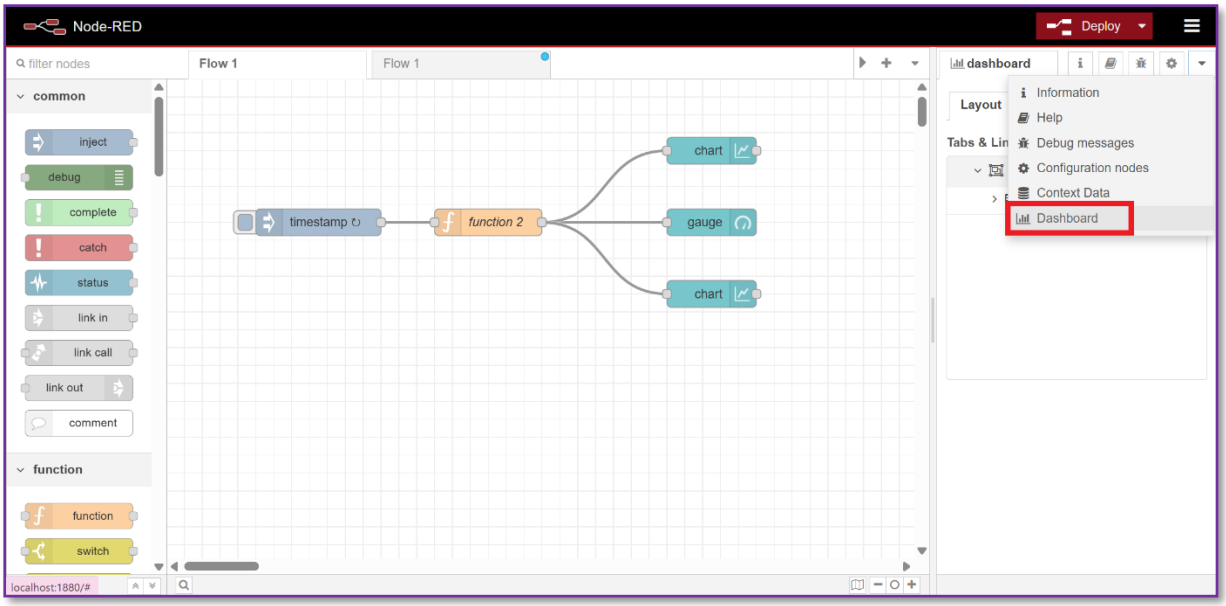

Open
Downloads
Search Downloads
Organize
New folder
Home
Gallery
Desktop
Documents
Videos
Downloads
Mine
Learnlike corp
Payments
Learnlike Traini
Learnlike docu
Partnerships
shorts
Power BI
OpenSolver2.9.3_l
Latest songs
Course Materials
This PC
Windows-SSD (C
My Volume (H:)
Today
flows.json
Yesterday
metabase
Last month
Latest songs
File name:
JSON File (*.json)
Open
Cancel


Import nodes
Clipboard
Paste flow json or
select a file to import
Local
Examples
[
{
"id": "56e0e40aadeb17b4",
"type": "tab",
"label": "Flow 1",
"disabled": false,
"info": "",
"env": []
},
{
"id": "7ae0be73f3739519",
"type": "inject",
"z": "56e0e40aadeb17b4",
"name": "",
"props": [
{
"p": "payload"
}
],
Import to
current flow
new flow
Cancel
Import



6. To access the UI in your browser, type http://localhost:1880/ui.

7. You can customize the dashboard layout according to your preference.



8. Visit the **Node-RED Tutorials** YouTube channel page for step-by-step guides.

https://www.youtube.com/playlist?list=PLyNBB9VCLmo1hyO-4fIZ08gqFcXBkHy-6

9. You can access the **Node-RED User Guide** at the official website:
   Node-RED User Guide
   This guide covers installation, flow creation, nodes, dashboards, and advanced features.